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University of Technology, 1 John Street, Hawthorn, Victoria 3122 (AU).

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(74) Agent: **GRIFFITH HACK**; GPO Box 1285K, Level 3, 509 St Kilda Road, Melbourne, Victoria 3001 (AU).

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(71) Applicant (*for all designated States except US*): **CRC FOR INTELLIGENT MANUFACTURING SYSTEMS & TECHNOLOGIES LTD** [AU/AU]; Corner Albert & Raglan Streets, Preston, Victoria 3072 (AU).

(72) Inventors; and

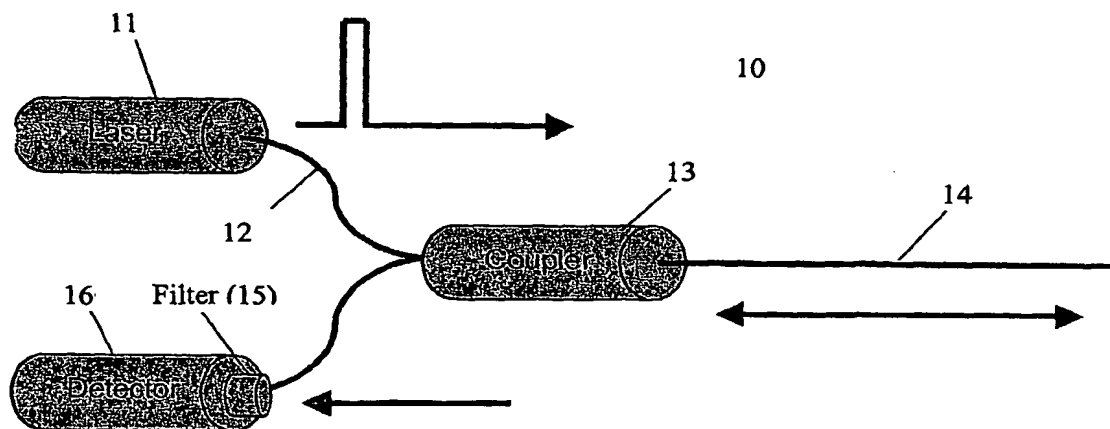
(75) Inventors/Applicants (*for US only*): **SEEBACHER, Peter, John** [AU/AU]; 28 Jackson Crescent, Pennant Hills, New South Wales 2120 (AU). **HOOK, Ian, Keith** [AU/AU]; 6 Mary Street, North Mead, New South Wales 2152 (AU). **STODDART, Paul, Randall** [ZA/AU]; C/o-Centre for Imaging and Applied Optics, Swinburne

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(54) Title: DISTRIBUTED TEMPERATURE SENSOR USING OPTICAL REFLECTOMETRY



(57) Abstract: A temperature sensing method in which pulses of optical radiation are launched by a laser diode (11) into an optical fibre (14) and optical radiation backscattered from the fibre is detected, the method comprising passing the backscattered radiation through a single optical filter (15) whereby a first signal is recorded at the anti-Stokes Raman wavelength from a signal launched by the laser diode in a laser mode and a second signal is recorded at the Rayleigh wavelength from a signal launched by the laser diode in a light emitting diode mode, and a comparison is made of the two signals to provide an indication of temperature.